



















Hosted by

RNET A R

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Brian
Brian Walsh

Michael McCarthy
San Francisco CA









Net-Work Shop

—September 19, 2011—

DAVID RUSSELL

SAN
LEANDRO, CA

How do we
MINUS get
into FIBER?



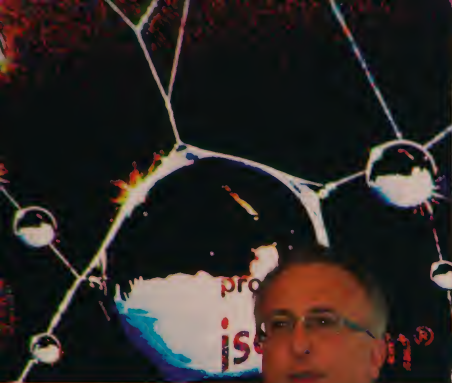
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App



- Develop test-beds for next-gen network deployments and app development
- Use ... to attract private capital ... and ... costs ... to reveal trade-offs



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US and POLITICAL...

CARRIERS
PLOYMENT of
R...
Settlement
agreements.

Incentives?

- What are the BENEFITS?
- How about public SHARING?

A WAVE of NEW BARRIERS to ENTRY?

In response, we say: ECONOMIC DEVELOPMENT... ECONOMIC DEVELOPMENT... ECONOMIC DEVELOPMENT... as well as EDUCATION.

READY MESSAGING!

APPS for 616

HEALTH CARE

RENTAL PROPERTIES

CAPABILITY for PLANNING and NO SPOOLS

VIDEO

Multiple Needs

Showering Video

A Choice

"WE CAN'T EVEN IMAGINE WHAT IT WILL LOOK LIKE WHEN WE GET TO MULTIPLE CSES!"

"The MUNICIPAL MARKET has NOT dried up!"

NCE

- Private Sector should FUND this...
- Low Interest Rates...
- If you don't have a utility backing you, it will be TOUGH.

"NO EXCLUSIVITY!"

PILOT.

PENETRATE UNDERWRITTEN PART of the MARKET

We may not like EXCLUSIVITY, but...

ENTREPRENEURSHIP

Look at OFFERING DARK FIBRE as something to sell. Put out an RFI on DARK FIBRE

LEADERSHIP

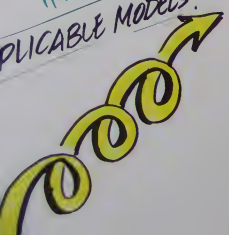
"Fibre is also an INFRASTRUCTURE INVESTMENT!"

Elected officials need to STAND UP to the INCUMBENTS.

Reduce your COSTS... Streamline your PROCESSES

Design your INFRASTRUCTURE for different technology

APPLICABLE MODELS!



THE NET-WORKSHOP

September 19, 2011

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Google fiber

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8:00 to 9:00 AM: Registration, Breakfast

9:00 to 10:45 AM: Introductions

10:45 to 11:15 AM: Refreshments

11:15 AM to 12:30 PM:

1. Main Themes:

- From middle-mile/anchor-institutions to connected community
- How to live without a municipal utility

2. Introduction to BOF Lunch

12:30 to 2:00 PM: BOF Lunch

2:00 to 3:30 PM:

1. Sponsor Welcomes & 2. Keynotes by

- Mayor Joe Reardon
- Katie Espeseth
- Lev Gonick
- Milo Medin

3:30 to 4:00 PM: Refreshments

4:00 to 5:30 PM: BOF Reports & further discussion

5:30 to 6:30 PM: Reception

WHY WE'RE HERE...

A HARE BRAINED IDEA?

Well... a lot of people bought into it.

BUILD RELATIONSHIPS...

THINK TOGETHER...

SOLVE PROBLEMS...

A COMMUNITY OF INTEREST!

Net-Work Shop

September 19, 2011
San Francisco, CA



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INTERNET ARCHIVE

"What a PRIVILEGE to be here!"

THE NEW LIBRARY OF ALEXANDRIA?

BRYAN KAHLE:

A NEW STYLE LIBRARY for the DIGITAL GENERATION

- We NEED to HAVE the WILL for OPENNESS...
- A NEW WAY of "OWNING the NETWORK"

- Books...
- Music...
- Lectures...
- Content...
- Media (Video, Audio)

"We're allergic to monthly fees!"

FAST and FREE

SAN FRANCISCO:

■ We are working on a MODEL for COMMUNITY BROADBAND NETWORK

- Firehouses...
- Public housing...
- Libraries...
- UCSF...

- ✓ SUSTAINABLE...
- ✓ LAST MILE PROVIDER...
- ✓ INEXPENSIVE...
- ✓ ACCESSIBLE...

THE BEST WAY to PREDICT the FUTURE > **CREATE it and INVENT it yourself!**

WHAT ARE YOU?
WHAT AREN'T YOU?

A LEGO-LIKE APPROACH?



We OWN the assets. Our BUSINESS MODEL IS INTERESTING!

TELECOMMUNICATIONS STRATEGIC PLAN

- ✓ Sharing resources...
- ✓ Getting people on the same page...

FIBER OPTIC TRAFFIC LIGHTS
A full connected COMMUNITY!

A intergovernmental entity!



"WE'RE ON THE SAME PAGE!"

- MICROWAVE OVERLAY...
- OPEN CAGE...
- SMARTER CAGE...
- CO-LOCATION CENTER
- MUNICIPAL RAIL

In Sandy, OR...

T-1??:

"Let's get you something FASTER! Fiber in the Home?"

PARTNERSHIPS with PRIVATE and PUBLIC PARTNERS.

- ✓ We're CREATIVE!
- ✓ We're THINKING DIFFERENTLY!

Building MUNICIPAL NETWORKS



HIAWATHA BROADBAND

Municipalities work in challenging environments!

- We LIKE municipal networks!
- ✓ Municipal limits - bucking outside limits

GOOD for BUSINESS

GOOD for EDUCATION



UNIVERSAL?!

- ✓ If it isn't, I don't want to hear about it!

In PUASAT, TN...

Municipal ELECTRIC SERVICE, along with SMARTGRIDS.

In PORTLAND

We are making the case that BROADBAND DRIVES JOBS!

Competing in the GLOBAL DIGITAL ECONOMY!

BROADBAND. It's ESSENTIAL!

Banish "BIG BROADBAND"?

In another community near BEND, OR... We kicked out the cable company and formed a PUBLIC PRIVATE PARTNERSHIP!

FIBER to the HOME! It's CRUCIAL... or else we'll disappear as a community!

What we need is a ROOFTOP to create COMMUNITY WIRELESS!

Two more pilot cities needed? Tall buildings preferred!

Net-Work Shop...

THIS IS:

- TECHNOLOGICAL...
- SOCIAL...
- POLITICAL...

"Let's think of this as a complex issue!"

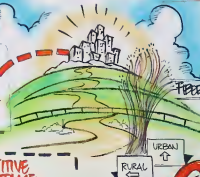
- ✓ FINANCIAL...
- ✓ LEADERSHIP...
- ✓ COOPERATION/ PARTNERSHIP...
- ✓ INCUBENCY...

2.

✓ **CONNECTED COMMUNITIES**

Last Mile is more than just "fiber to the home."

"Urban and Rural" are different and have different NEEDS.



"You don't have to be out amongst the cows to not have connection and access!"

TO SAN LEANDRO...

"MUST HAVE" is relative, depending on the community.

? WHAT
are you trying to **Do?**

We framed a non-profit structure in order to give us more FLEXIBILITY and less RESTRICTION.

- COMPETITIVE MARKETPLACE
- DIFFERENT SERVICE PROVISION
- COMPELLING SERVICE RATES

How to get FIBER from place to place?

? QUESTIONS to CONSIDER...
FULL COVERAGE?
FUTURE PROOF?
COMPELLING?
CHANGING LIVES?

• INTERCONNECT!

• Small telco's don't want to give up monopolies.

? WHAT
are the **MUST HAVES**

Are we **AHEAD** of the PUBLIC? Do they understand why this is **IMPORTANT**?

Do something **TRANSFORMATIVE!**

POINT OF INTERCONNECT...

VOICE for the COMMUNITY...

DELIVERING SOMETHING OF VALUE for the COMMUNITY...

"MIDDLE MILE"?
"LAST MILE"?

How Do MIDDLE MILE NETWORKS enable LAST MILE NETWORKS?

"TRIPLE PLAY IS DEAD!"

"I don't even use LANDLINES anymore..."

"Islands of Fiber"

• "LAST MILE" or "FIRST MILE"?

"DAD! It's a GIG!"

BROADBAND

"I'm SATISFIED..."

"Do you know what my **PRIORITIES** are?!"



"Talk to your Community!"

Engage Me...





Net-Work Shop

September 19, 2011



Sorry, here's a bucket of paperwork but NO MONEY.

City Hall

THIS IS A SIGNIFICANT ASSET for US!

In order to enhance CITIZEN ENGAGEMENT, you need to answer:

13

WHY is this an infrastructure PRIORITY?

- We're DIVERSE!
- We're increasingly SUBURBAN!
- We OWN nearly all the necessary physical assets...
- We have a great SCHOOL SYSTEM and every student has a laptop.
- The CITY and COUNTY are MERGED!

"We believe in PUBLIC-PRIVATE PARTNERSHIPS!"
JOE BOARDEN
Kansas City, KS Mayor



How do we help MUNIS get into FIBER?

CALIX:

"WE'RE IN THE FIBER-TO-HOME BUSINESS as well as helping PUBLIC-PRIVATE PARTNERSHIPS."

DAVID RUSSELL

"It was a year ago that we first talked about doing something like this..."



★ This kind of ATMOSPHERE, where people are able to INTERACT, is just WHAT IS NEEDED!

SHOULD WE DO THIS AGAIN NEXT YEAR?

"Our place is to PROVIDE the INFRASTRUCTURE!"

You need a GROUNDSWELL of SUPPORT...



- What does Kansas City, KS bring to the table?
- REGULATORY NAVIGATION...
 - ACCESS to CITY/COUNTY ASSETS...
 - GETTING THINGS through the PROCESS quickly!
 - BRINGING PARTNERS TOGETHER!

The CHATTANOOGA EXAMPLE...

MUNICIPALLY-OWNED SMART GRID

- ✓ 120 SQUARE MILES (coverage area)
- ✓ 6000 MILES of FIBER
- ✓ FIBER to every HOME, BUSINESS

LARGEST!

- ECONOMIC DEVELOPMENT
2600 new jobs?
- ENHANCED EDUCATION!
Increased efficiency, capability for better educational methods.



Ultimately... It's about IMPROVING QUALITY of LIFE!

...and PROVIDING CHOICES!

TABLE TALK

- **CRUIZ BARRIERS** to DEPLOYMENT of FIBER...
 - Settlement Agreements

LEGAL and POLITICAL...

- **Incentives?**
 - What are the BENEFITS?
 - How about public SHARING?

"There are DOZENS of ISSUES here!"

- **A WAVE of NEW BARRIERS to ENTRY?**
 - In response, we say: ECONOMIC DEVELOPMENT... ECONOMIC DEVELOPMENT... ...as well as EDUCATION.

★ **COALITION BUILDING!**

★ **RESOURCE MOBILIZATION!**

★ **EARLY MESSAGING!**



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FINANCE

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REPLICABLE MODELS!



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ENTREPRENEURSHIP

- Look at OFFERING DARK FIBER as something to sell.
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- Reduce your COSTS... Streamline your PROCESSES.
- Design your INFRASTRUCTURE for different technologies

"WE CAN'T EVEN IMAGINE WHAT IT WILL LOOK LIKE WHEN WE GET TO MULTIPLE GIGS!"

LEADERSHIP

- Elected officials need to STAND UP to the INCUMBENTS.

"FIBER is also an INFRASTRUCTURE INVESTMENT!"

- Engage with the COMMUNITY around "fiber to the home!"
- Initiate DEMONSTRATION PROJECTS.



HEALTH CARE

- REMOTE SURGERIES



APPS for a GIG

- CAPACITY for GAMES and HD SPORTS VIDEO.

- Multiple Feeds
- Streaming Video & Content

■ **MOVOGRAMS**

- **EVERYTHING IS GOING to the CLOUD!**
 - Upload Speeds

...and it's IMPORTANT!

"INNOVATION happens when there is **CONSTRAINT**..."

The EXAMPLE OF CLEVELAND, OH

3 "Acts"

3. GIGU

1. ONE COMMUNITY

- Innovative social enterprise...
- Regional network serving NE Ohio...

2.

COMMUNITY INFRASTRUCTURE PROJECT

- University-Community Next Generation Innovation Project
- Accelerate deployment of next generation services in the surrounding neighborhoods.
- Key targets — aggregating interest.

"We're leveraging UNIVERSITY RESOURCES while RESPONDING to COMMUNITY NEEDS!"

CASE CONNECTION ZONE:

- Safety Monitoring
- Health Monitoring
- HD Video Consultation for mental health

BENEFITS:

- CIVIC ENGAGEMENT! The NEIGHBORHOOD is REVITALIZED and DESIRABLE!
- NEW BETA BLOCK COMING SOON!

"It's NOT ENOUGH to WIN... OTHERS MUST LOSE!"
Genghis Khan

YOU HAVE TO HAVE SCALE!
BY CREATIVE!

"It's an INTERESTING TIME!"

TELECOM are NOT INVESTING in RESIDENTIAL FIBER.

NOT JUST ONE SOLUTION WORKS EVERYWHERE...

- Cost Control is CRUCIAL!
- Process optimization

GIGABITS

MOVING the WEB from MEGABITS to GIGABITS...

MEGABITS

CHALLENGES:

- REGULATION!
- INCENTIVES
- PROCESSES
- COST



SHARING INFO in WHY KANSAS CITY was chosen for the ROLLOUT...

- Focused on product, not PR.
- This is the beginning MORE LESSONS to come!

SHARING BEST PRACTICES:

- ENDLESS CONVERSATION CYCLES should be MINIMIZED
- LOOK for COLLABORATION between JURISDICTIONS.
- "WHERE WILL IT WORK?"